

**Replace the Abstract with:**

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A vacuum deposition system has been designed which increases deposition process yield and throughput. The system may be used, for example, to produce thin film based demultiplexers with high throughput and production yields of greater than 25% for use in Dense Wavelength Division Multiplexer (DWDM) systems. The system may employ[[s]] a dense array of high yield fixtures and an ion assisted movable dual electron beam evaporation system. The fixture array may increase[[s]] acceptable yields of narrow band pass filters to 25-75% compared to less than 5% in conventional coating systems used for DWDM. The movable e-beam system allows critical symmetry to be maintained while eliminating significant delays resulting from deposition of two materials from a single electron gun. The vacuum deposition system [[will]] may enable production of more than 15,000 50-200 GHZ filters which meet specifications for DWDM demultiplexers every 48 hours.